

**RAISING AND MAINTAINING THE VALUE OF THE STATE MINIMUM WAGE:
AN ECONOMIC IMPACT STUDY OF ILLINOIS**

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RAISING AND MAINTAINING THE VALUE OF THE ILLINOIS MINIMUM WAGE: AN ECONOMIC IMPACT STUDY

UIC CENTER FOR URBAN ECONOMIC DEVELOPMENT

Executive Summary

The economic boom of the 1990s is rightly noted for lifting the wages of the vast majority of Illinois workers. But for all its force, the boom failed to reverse the long-term decline in the spending power of low-income households, particularly those reliant on minimum and near-minimum wage earners. Although the nominal value of the federal minimum wage is at an all-time high of \$5.15 per hour, failure to adjust it for inflation has led real hourly wages of minimum and near-minimum wage workers to erode to a level near their all-time low.

In response to this problem, the Illinois General Assembly is considering the creation of a state minimum wage of \$6.50 as well as a statutory provision to adjust that wage for inflation.

The UIC Center for Urban Economic Development has undertaken a comprehensive assessment of the need for and the economic impact of the proposed Illinois minimum wage. Our research was designed to answer three specific questions:

- Is the minimum wage an effective policy for improving the earnings of low-income households?
- Does raising the minimum wage weaken the competitive position of Illinois industries or impose excessive increases in labor costs?
- Does a higher minimum wage result in lower employment levels?

To answer these questions, we analyzed the wage and employment characteristics of Illinois households with workers earning at or near the minimum wage, conducted an in-depth statistical study of the relationship between state minimum wages and employment levels, and examined the changing characteristics of the low-wage workforce over a five-year period surrounding the 1997 federal minimum wage increase.

The evidence from this research suggests that an inflation-indexed Illinois minimum wage of \$6.50 per hour will improve the earnings of a significant share of low-income workers and households while imposing minimal costs to businesses and resulting in a negligible impact on overall employment.

Highlights from our findings include:

Benefit to Illinois Workers

- Raising the minimum wage to \$6.50 would directly benefit approximately 450,000 Illinois workers currently earning between \$5.15 and \$6.50 per hour. Approximately 350,000 additional workers currently earning between \$6.50 and \$7.50 per hour would also be likely to receive modest pay raises.

The Eroding Value of the Federal Minimum Wage

- The real (inflation-adjusted) value of the minimum wage in Illinois has eroded to near its all-time low, from \$8.27 in 1968 to \$5.15 today (all figures in 2002 dollars).
- Only \$0.13 of the \$0.90 federal minimum wage increase of 1996-97 remains after accounting for inflation.

Profile of the Illinois Minimum Wage Workforce

- More than one-third of the Illinois families with a worker earning between \$5.15 and \$6.50 per hour received all of their income from jobs paying less than \$6.50.
- Workers currently earning between \$5.15 and \$6.50 per hour are far more likely than are other workers to live in households with children age five or younger (34% compared to 24%).
- Only 25 percent of Illinois workers currently earning between \$5.15 and \$6.50 per hour are students. Nearly 70 percent are age 20 or over and nearly one-third are heads of household.

Adequacy of the Federal Minimum Wage

- A full-time minimum wage worker in Illinois earns 55 percent of the federal poverty threshold for a family of four, and also falls short of the poverty threshold (\$12,400) for a family of two.
- Between 26 and 43 percent of Illinois households with a minimum or near-minimum wage earner fall below the self-sufficiency standard for meeting basic household expenses.

Impacts on Business and Industry

- New wage payments to workers currently earning between \$5.15 and \$6.50 per hour would total 0.35 percent of wages Illinois businesses paid to workers in 2001. “Spillover” wage raises for workers currently earning between \$6.50 and

\$7.50 per hour would push this total to 0.49 percent of the wages Illinois businesses paid to workers in 2001.

- New wage payments to directly impacted workers would trigger \$900 million in additional sales for Illinois businesses. When “spillover” wage payments for workers currently earning between \$6.50 and \$7.50 per hour are included, this figure reaches \$1.2 billion.

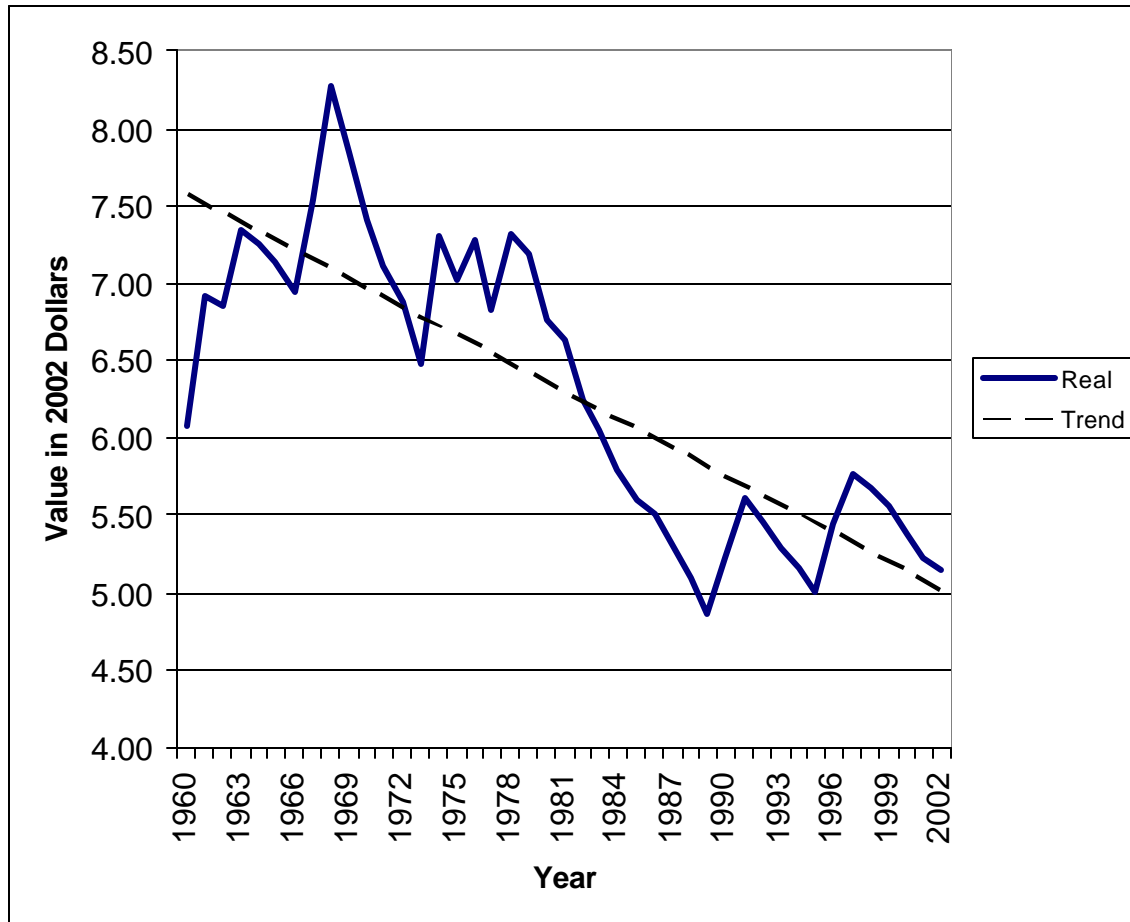
Employment Impacts

- A comprehensive study of all 50 states and the District of Columbia over a period of 19 years shows no statistically significant relationship between the value of the minimum wage and employment growth in industries reliant on low-wage workers.

The Need for a Cost-of-Living Adjustment (COLA)

- A COLA would maintain the benefits of the \$6.50 minimum wage to Illinois and would extend to low-income households the annual COLA enjoyed by most state government workers.
- Our study of all 50 states and the District of Columbia over the course of 19 years finds no evidence that inflation-induced declines in the real value of the minimum wage are linked to increased employment growth.

CHART
REAL VALUE OF THE FEDERAL MINIMUM WAGE, 1960-2002



Source: UIC-CUED analysis of U.S. Bureau of Labor Statistics data.

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I. INTRODUCTION

The economic boom of the 1990s is rightly noted for lifting the wages of the vast majority of Illinois workers. But for all its force, the boom failed to reverse the long-term decline in the spending power of low-income households and the estimated 804,000 Illinois workers earning at or near the minimum wage.¹ Although the nominal value of the federal minimum wage is at an all-time high of \$5.15 per hour, failure to adjust it for inflation has led the real hourly earnings of minimum wage and near-minimum wage workers to quietly erode to a level near their all-time low.

The real (inflation-adjusted) value of the minimum wage has declined steadily over the last three decades, from \$8.27 in 1968 to its present-day value of \$5.15 (2002 dollars).² Meanwhile, the cost of living is headed in the opposite direction. Even in an era of historically low inflation rates, housing and healthcare costs in Illinois are increasing more than five percent annually.³ Although inadequately captured by traditional measures of inflation, these rising costs have pushed a modest standard of living further out of the reach of most low-wage workers.

The Illinois General Assembly has taken up this matter in the form of a bill proposing to establish a state minimum wage of \$6.50 per hour, and to index that wage to inflation. Illinois is not alone in considering the merits of a state minimum wage that compensates for the long-term erosion of the federal minimum wage. In the last five years, 11 states as well as the District of Columbia have responded to the problem of the declining standard of living for low-wage workers by establishing or updating state-level minimum wages that are higher than the \$5.15 mandated under the Fair Labor Standards Act (Table 1). In several cases, states have increased the value of the minimum wage by nearly one-third; Oregon, Washington, Connecticut, Massachusetts, and California have established minimum wages of \$6.50 or higher. Under the terms of its COLA, Washington State annually updates its minimum wage to maintain its initial 2000 value of \$6.76. On January 1, 2003, Washington State's COLA pushed its minimum wage to \$7.01. COLAs will soon take effect in Oregon and Alaska as well.

Table 1: State-Level Minimum Wages, 2003

State	Rate	State	Rate
Alaska	\$7.15	Maine	\$6.25
California	\$6.75	Massachusetts	\$6.75
Connecticut	\$6.90	Oregon	\$6.90
Delaware	\$6.15	Rhode Island	\$6.15
District of Columbia	\$6.15	Vermont	\$6.25
Hawaii	\$6.25	Washington	\$7.01

Source: U.S. Department of Labor, <http://www.dol.gov/esa/minwage/america.htm>

Although raising the minimum wage would directly improve the incomes of hundreds of thousands of Illinois workers, the long-term efficacy of the minimum wage in lifting workers out of poverty remains fiercely contested. Opponents of the minimum wage level several charges. First, they contend that the policy is poorly targeted. In their view, higher minimum wages serve mainly to raise the earnings of younger workers who more often than not reside in households with high-income earners. Second, they argue that higher labor costs would hurt the competitiveness of Illinois industries vis-à-vis industries in neighboring states. And third, they caution that employers would respond to higher wages by laying off workers. In short, opponents argue that raising the minimum wage weakens the overall economy and hurts the very workers it is intended to help.

In this report, we evaluate the probable impact of raising the Illinois minimum wage to \$6.50 and maintaining its value through a COLA. The report takes into consideration prevailing criticisms of minimum wage increases as well as empirical data on the past impact of such increases. Section Two assesses the need for a state minimum wage by analyzing the long-term downward trend in the value of the minimum wage and profiling low-wage workers in Illinois. In Section Three, we consider the impacts of a \$6.50 minimum wage on Illinois workers and businesses, and evaluate the primary concerns raised by critics of the minimum wage. Section Four looks specifically at the issue of the COLA, and asks whether it will augment or diminish the potential benefits of a \$6.50 minimum wage.

Our analysis finds that a \$6.50 minimum wage with a COLA would benefit a large number of minimum wage workers and households while imposing minimal costs on employers. Additionally, our research on past minimum wage increases finds that raising the minimum wage has an insignificant impact on employment growth. We conclude that a COLA is essential for maintaining these benefits.

II. EVALUATING THE NEED FOR A NEW MINIMUM WAGE IN ILLINOIS

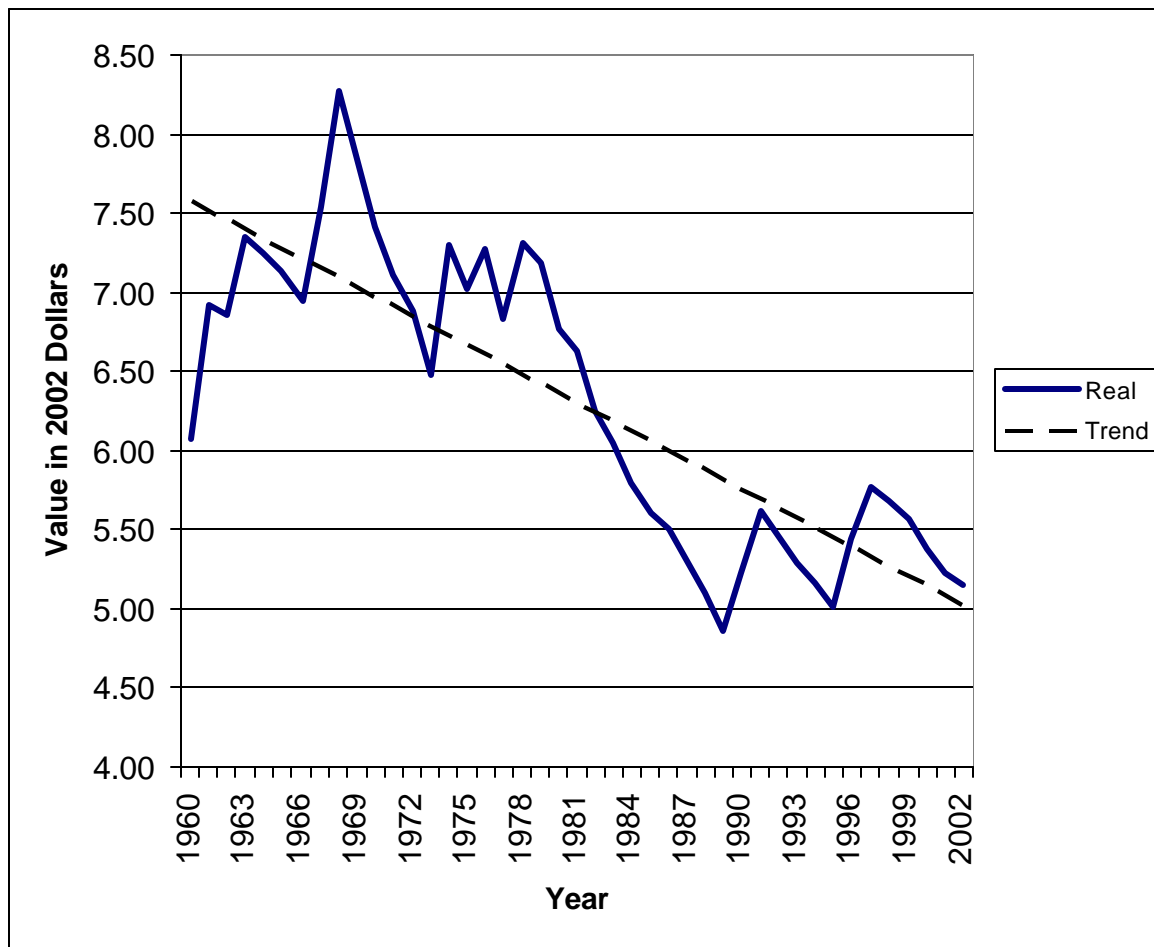
The need for a \$6.50 minimum wage depends on the ability of the current minimum wage to meet the needs of its earners. To address this question, we first assess long-term changes in the real value of the minimum wage. We then turn to the Illinois workforce and assess the earnings and needs of the households in which minimum wage and near-minimum wage workers reside.

THE VALUE OF THE MINIMUM WAGE

The real value of the minimum wage has fallen dramatically from its apex in 1968. Although Congress has periodically authorized raises in the minimum wage, on the whole, these increases have failed to keep pace with inflation. Unlike the federal poverty line as well as Social Security, the Earned Income Tax Credit, and many other federal programs, the minimum wage is not automatically adjusted to keep pace with inflation.

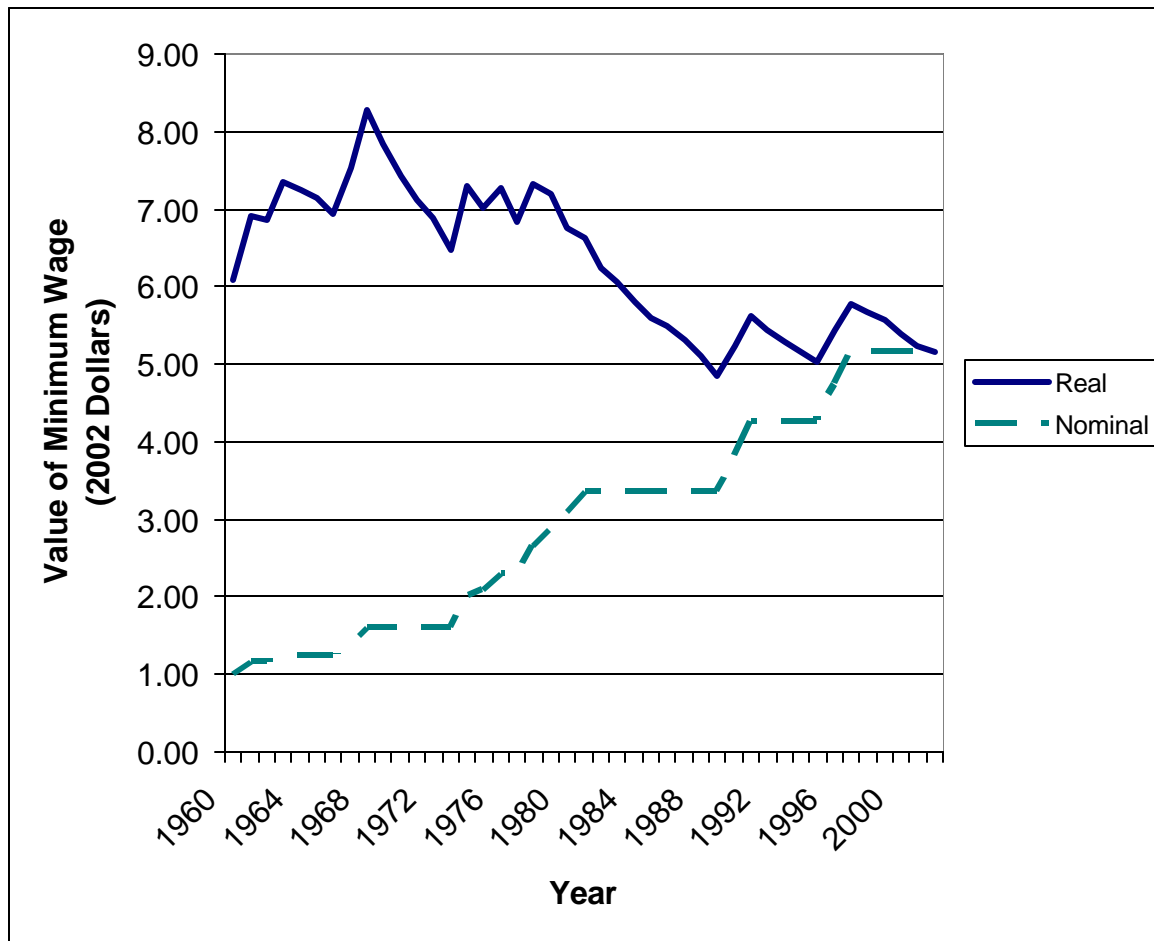
Therefore, the purchasing power of families dependent on minimum wage and near-minimum wage jobs diminishes each year the minimum wage is not updated. As a result, the \$5.15 minimum wage of today is worth just 76 percent of what it was in 1980 (real value=\$6.77) and only 62 percent of what it was worth in 1968 (real value=\$8.27). This trend shows no sign of abating (Charts 1 and 2): At the historic rate of inflation, the minimum wage will fall below its all-time, inflation-adjusted low value of \$4.86 by 2005.⁴ In order to assess the impact of this long-run decline in the value of the minimum wage, we now turn to a description of the population that relies on these wages.

Chart 1: The Real Value of the Federal Minimum Wage, 1960-2002



Source: UIC-CUED analysis of U.S. Bureau of Labor Statistics data.

Chart 2: The Value of the Federal Minimum Wage, 1960-2002



Source: UIC-CUED analysis of U.S. Bureau of Labor Statistics data.

PROFILE OF THE MINIMUM WAGE WORKFORCE IN ILLINOIS

An Illinois minimum wage of \$6.50 will raise the wages of approximately 450,000 directly impacted workers who currently earn below this amount. At the current hourly rate of \$5.15, a full-time worker (40 hours per week, 52 weeks per year) earning the minimum wage has a pre-tax annual gross income of \$10,712. For this worker, raising the minimum wage to \$6.50 results in a pre-tax annual gross income of \$13,520, an increase of \$2,808 (26.2%). The question for policymakers is: For whom will a \$6.50 minimum wage raise earnings?

This section describes in detail the population earning at or near the minimum wage from 1996 (the first year of the most recent two-step increase to the minimum wage) to 2001. This period provides a look at the low-wage population in different economic contexts: 1996 and 1998 were boom years, while 2001, the most recent year for which annualized micro-data are available, was a recession year.⁵ The analysis here focuses on workers earning between \$5.15 and \$6.50 per hour, the group of workers directly affected by the

proposed \$6.50 minimum wage. Studies have shown that along with workers whose earnings rise as a direct result of a minimum wage increase, workers earning wages slightly higher than the proposed \$6.50 minimum would also experience modest pay raises.⁶ Accordingly, we have modified our analysis to include the segment of the workforce that currently earns \$6.51 to \$7.50 per hour. We also begin by examining the demographic characteristics of both sets of workers.

Demographic Characteristics of Low-Wage Workers in Illinois

When considering the likely impacts of an Illinois minimum wage set at \$6.50, a particular population of interest is comprised of workers earning between \$5.15 (the current federal minimum wage) and \$6.50 per hour. These workers would benefit directly from the proposed increase. The demographic characteristics of these workers are summarized in Table 2.

Table 2: Characteristics of Minimum and Near-Minimum Wage Workers in Illinois

	Earning \$5.15-\$6.50	Earning \$6.51-\$7.50	Not affected	Total workforce*
Percent of workforce	5.9%	6.6%	85.6%	100.0%
<i>Gender</i>				
Male	41.7%	42.4%	53.4%	51.6%
Female	58.3%	57.6%	46.6%	48.4%
<i>Age</i>				
16-19	31.8%	12.4%	2.3%	5.0%
20 and older	68.2%	87.6%	97.7%	95.0%
<i>Work hours</i>				
Part-time	52.7%	37.7%	12.8%	17.5%
Full-time (35+ hrs.)	47.3%	62.3%	87.2%	82.5%
<i>Industry</i>				
Retail trade	47.6%	36.2%	12.2%	16.2%
Manufacturing	<10%	<10%	18.0%	16.6%
<i>Occupation</i>				
Sales	25.4%	19.7%	10.0%	11.7%
Service	35.1%	30.4%	8.1%	11.6%

Source: Economic Policy Institute analysis of Current Population Survey data.

Table 3 lists the statistical means for a variety of variables describing the Illinois workforce. Comparing means of all Illinois workers to those earning between \$5.15 and \$6.50 highlights some important characteristics of minimum wage and near-minimum wage earners in Illinois. As a reference, Table 4 provides the same information for workers in the United States as a whole.

Table 3: Statistical Means for Selected Variables: Illinois Workers, 2001

	All Illinois Workers	Illinois Workers Earning \$5.15 to \$6.50 per hour	Illinois Workers Earning between \$6.51 and \$7.50 per hour
Age	38.8	31.1	35.0
Female	48.2%	59.0%	58.0%
High School Graduate	29.6%	32.0%	37.5%
Some Post-Secondary	30.1%	20.6%	33.4%
College Graduate	19.3%	4.1%	5.1%
Post-Graduate	9.0%	1.3%	0.8%
Less Than High School Diploma	11.9%	42.0%	23.1%
Unmarried	31.1%	59.4%	46.1%
Married	55.0%	28.9%	45.0%
Divorced	13.8%	11.7%	9.0%
Nonwhite	17.0%	20.0%	34.0%
Student	5.7%	24.8%	14.2%
Head of Household	51.8%	32.2%	39.7%
Hourly Pay Rate	\$16.80	\$5.97	\$7.08
Usual Weekly Hours	38.5	30.2	33.9
Presence of Own Children	64.4%	39.5%	56.0%

Source: UIC-CUED analysis of U.S. Current Population Survey data.

Table 4: Statistical Means for Selected Variables: All U.S. Workers, 2001

	All U.S. Workers	U.S. Workers Earning \$5.15 to \$6.50 per hour	U.S. Workers Earning between \$6.51 and \$7.50 per hour
Age	38.9	32.3	34.6
Female	48.1%	61.0%	58.7%
High School Graduate	30.9%	32.4%	37.2%
Some Post-Secondary	29.3%	23.8%	27.6%
College Graduate	18.5%	4.5%	5.7%
Post-Graduate	8.8%	1.2%	1.4%
Less Than High School Diploma	12.5%	38.1%	28.2%
Unmarried	29.1%	52.4%	44.6%
Married	56.3%	34.5%	41.4%
Divorced	14.6%	13.1%	14.1%
Nonwhite	27.8%	40.2%	39.2%
Student	6.0%	22.9%	14.8%
Head of Household	51.3%	33.5%	41.0%
Hourly Pay Rate	\$16.36	\$5.95	\$7.11
Usual Weekly Hours	38.3	31.1	34.1
Presence of Own Children	66.0%	46.4%	53.6%

Source: UIC-CUED analysis of U.S. Current Population Survey data.

Minimum wage and near-minimum wage workers are commonly stereotyped as young people, often students, whose basic needs are provided for by a higher-wage earner (usually a parent) in the same household. From this viewpoint, the minimum wage is a poorly targeted policy that augments supplemental or discretionary income as opposed to the primary household income used to cover basic needs. For many Illinois households, however, this characterization is inaccurate. As shown in Table 5, more than one-third of the families receiving earnings from a worker paid \$6.50 or less per hour received *all* of their earnings from workers in that range.

Table 5: The Share of Weekly Earnings Contributed by Minimum Wage Workers, 2001

	Average Share	Median Share	Share of Families Receiving 100% of Income from Affected Workers (earning \$5.15-\$6.50 per hour)
All families with an affected worker (earning \$5.15-\$6.50 per hour)	48%	34%	34%
Excluding families without children	45%	28%	32%

Source: Economic Policy Institute analysis of Current Population Survey data

While the data show that minimum and near-minimum wage earners are less likely to be the primary earners in their households, the data also show that nearly one-third are heads of household and that 40 percent are married or divorced.

Several data points from Table 2 above portray a significantly different minimum wage workforce than that of the popular image:

- Less than one-quarter of the workers that would be directly impacted by the \$6.50 minimum wage are students.
- The average age of these workers is 31 years. As noted in Table 2, only 32 percent of these workers are teenagers.
- The average earner in this range works more than 30 hours per week, suggesting that a substantial portion of the directly impacted earners would be full-time workers.
- Nearly 40 percent of these workers reside in households with children. Additionally, these workers are more likely to be living in households with children age five or younger. This is expected, given our finding that the minimum and near-minimum wage earning population is younger than the overall working population in Illinois.

These findings are supported by William Carrington and Bruce Fallick's recent study of low-wage workers. Using data from the National Longitudinal Study of Youth, this study found that eight percent of all workers spend more than half of their first 10 years after education in jobs paying within \$1 of the minimum wage.⁷ A surprisingly large number of older workers also rely on jobs paying near the minimum wage. Even as workers enter their 40s and reach the peak of their earning potential, nearly 10 percent of both women and African Americans earn within \$1 of the minimum wage, and nearly 20 percent earn within \$2 of the minimum wage.⁸

Tables A1 and A2 of Appendix A repeat the data found in Tables 3 and 4 for the minimum and near-minimum wage workforces in Illinois and the United States, but also include estimated confidence intervals to help determine whether or not the differences between the two populations are statistically significant. As the tables in the Appendix show, when compared to the U.S. workforce as a whole, workers earning between \$5.15 and \$6.50 per hour are younger, more likely to be female, nonwhite, and students. They also are less likely to be heads of household, parents, or married, and their overall levels of educational attainment are lower than nationwide averages. As this comparison demonstrates, the overall working populations in Illinois and the United States are very similar. In other words, in these respects, the minimum and near-minimum wage workforce in Illinois is representative of that workforce nationwide.

Differences are found, however, in levels of educational attainment. Illinois workers earning minimum and near-minimum wages are less likely to be high school graduates and less likely to have had any post-secondary education than are these workers nationally. Although these workers in Illinois are more likely to be students compared to those nationwide, the similarity in ages of the two groups suggests that the higher proportion of students in Illinois cannot be attributed to a greater preponderance of high school students in low-wage jobs in the state.

ADEQUACY OF THE MINIMUM WAGE FOR ILLINOIS WORKING FAMILIES

As we have seen, one-third of all households with workers earning minimum and near-minimum wages depend exclusively on jobs at these wage levels to meet basic needs. A fundamental question in evaluating the need for a \$6.50 minimum wage is gauging the extent to which the current minimum wage meets the needs of these households.

A full-time minimum wage worker in Illinois (employed 40 hours per week, 52 weeks per year) earns \$10,712 annually, or 55 percent of the 2002 federal poverty threshold (\$18,244) for a family of four.⁹ A full-time worker earning a minimum wage of \$6.50 per hour would earn \$13,520, still well below the official poverty threshold. Moreover, the current federal minimum wage also fails to raise a single parent with one child above the poverty level (\$12,400). However, the proposed minimum wage of \$6.50 would allow that same family to reach the poverty threshold.

Without legislative adjustment, the adequacy of the minimum wage to meet the needs of low-income Illinois families will steadily deteriorate. The cost of goods, as measured by the Consumer Price Index, grew at the historically low rate of 1.58 percent in 2001, but other costs grew more rapidly.¹⁰ The average rent of a two-bedroom apartment in the Chicago area, for example, rose five percent, from \$891 to \$928 per month.¹¹ Average per-person healthcare expenditures grew at a 7.75 percent rate, from \$1,047 to \$1,126.¹²

The rapid increase in costs of living is one reason many poverty experts use a “self-sufficiency” wage to gauge family income needs. Self-sufficiency wages are developed using a “basic budget approach” that accounts for essential family needs such as food,

housing and healthcare, as well as work-related expenses including child care and transportation. A recent study of the cost of living in Illinois by the Women Employed Institute estimated a self-sufficiency hourly wage of \$11.14 *per adult* to support a family of four on the Chicago's North Side, \$8.77 per adult in Decatur, and \$8.61 per adult in downstate Marion County.¹³ As these figures indicate, the current federal minimum wage of \$5.15 falls well below family self-sufficiency needs.

The situation is similar for a family of two. The self-sufficiency wage for a single parent raising a teenage child is \$15.58 in Chicago, \$10.28 in Decatur, and \$9.25 in Marion County.¹⁴ Although the minimum wage comes much closer to meeting the needs of such a family than it does to meeting the needs of a family of four, it still provides less than one-third of the income a Chicago parent needs to raise a child. Holding two full-time, year-round, minimum-wage jobs would bring a single person to just over the self-sufficiency level for the Chicago metropolitan area. Tables 6 and 7 list self-sufficiency income levels, and the proportion of minimum and near-minimum wage workers in households earning incomes below self-sufficiency levels, respectively.¹⁵

Table 6: Self-Sufficiency Levels of Income by Household Size in Illinois, 2001

	One Person	Two to Three Persons	Households of Four Persons or More
Chicago Metro	\$19,000	\$32,000	\$45,000
Other Metro	\$15,000	\$24,000	\$38,000
Non-Metro	\$13,000	\$20,000	\$34,000

Source: Diana Pierce with Jennifer Brooks, 2001. *The Self-Sufficiency Standard for Illinois*. Chicago: Women Employed Institute.

Table 7: Proportions of Minimum and Near-Minimum Wage Workers in Low-Income Households, Illinois, 2001

	(Column 1)	(Column 2)	(Column 3)	(Column 4)
	Proportion of all households with at least one low-wage worker	Proportion of Households with low-wage workers that fall below self-sufficiency levels (3/4)	Proportion of Households with low-wage workers that fall below self-sufficiency levels (2/3)	Proportion of Households with low-wage workers that fall below self-sufficiency levels (1/2)
Chicago Metro	24%	27%	31%	43%
Other Metro	27%	29%	32%	47%
Non-Metro	31%	27%	30%	43%

Note: Column 2 assumes that each worker in a household works three-quarters time, Column 3 assumes two-thirds time, and Column 4 assumes half time. See explanation in text below.

Source: UIC-CUED analysis of U.S. Current Population Survey data.

Table 7 above shows the share of households with one or more minimum or near-minimum wage earner(s) that meet self-sufficiency levels under a number of different scenarios. According to our analysis, between 27 and 43 percent of the households with at least one person earning \$6.50 or less per hour fell below the self-sufficiency standard. The \$6.50 minimum wage would clearly help these households move toward self-sufficiency.

Two premises relevant to the low-wage population underpin these estimates of self-sufficiency. First, these percentages are not based on an assumption of year-round, full-time employment, because while year-round, full-time employment may be a safe assumption for the Illinois workforce as a whole, evidence suggests that the low-wage workforce commonly works neither full-time nor year-round. Accordingly, proportions of households below the self-sufficiency level are calculated for earners working on average three-quarters, two-thirds, or half time over the course of a year. The low end of the range (Column 2) assumes the average worker is employed either 30 hours per week year round, or 40 hours per week during three-quarters of the year. The middle range proportion (Column 3) assumes the average worker is employed either 25 hours per week, or 40 hours per week during two-thirds of the year. The higher proportions (Column 4) are calculated assuming the average worker works either 20 hours per week, or 40 hours per week during half of the year. These assumptions allow the data to reflect the situations of non-regular and seasonal workers.

Second, the findings in Tables 6 and 7 use the self-sufficiency income for households of four or more persons, rather than the standard for two- to three-person households. This is done for one very important reason. In Illinois and across the United States, households with at least one low-wage worker tend to be larger than are households without at least one low-wage worker (Table 8). Additionally, these household size

calculations do not include family members who do not report income. Since the data in Table 3 above indicate that low-wage workers are more likely to have small children at home to support, one can assume households with at least one low-wage worker are even larger. Therefore, the self-sufficiency standard for households of four or more persons remains the most appropriate for determining whether household incomes reach self-sufficiency levels.

Table 8: Average Household Sizes by Numbers of Workers, U.S., Illinois, and Areas within Illinois, 2001

	Average number of workers in a Household	Households <i>with</i> at least one worker earning at or below \$6.50 per hour	Households <i>without</i> at least one worker earning at or below \$6.50 per hour
United States	2.78	3.57	2.53
Illinois	3.06	3.78	2.81
Chicago Metro	3.16	3.97	2.91
Other Metro	2.83	3.40	2.62
Non-Metro	2.79	3.40	2.52

Source: UIC-CUED analysis of U.S. Current Population Survey Data

III. IMPACT OF RAISING THE ILLINOIS MINIMUM WAGE TO \$6.50

Any discussion of the impact of a \$6.50 minimum wage by necessity focuses on the impacted workers and the businesses that employ them. Critics argue that a higher minimum wage adversely affects the competitive position of state industries, decreases overall employment levels, and leads firms to substitute better-educated workers for less-educated ones. To assess these concerns, we begin by identifying the Illinois industries that would be most impacted by a minimum wage of \$6.50.

PROFILE OF BUSINESSES EMPLOYING SIGNIFICANT NUMBERS OF MINIMUM- AND NEAR-MINIMUM WAGE WORKERS

Minimum wage and near-minimum wage workers make up a small portion of the workforce for most Illinois businesses. In fact, these workers constitute 10 percent or more of the workforce in only 22 of the 208 Illinois industries (10.5%) listed in the U.S. Current Population Survey.¹⁶ Moreover, only 31 of the 208 industries in the state (14.9%) employ workforces in which minimum wage and near-minimum wage workers comprise more than five percent.

Although their representation in most industries is small, minimum wage and near-minimum wage workers constitute a substantial portion of the workforce in the retail trade and service sectors (Table 9).

The industries with the largest share of workers earning \$6.50 or less per hour are Eating and Drinking Establishments (57.9%), Gasoline Service Stations (39.0%), Grocery Stores (31.7%), and Hotels and Motels (29.5%).

The concentration of these industries in the retail trade and service sectors is well worth noting. While some critics of the minimum wage express concerns that raising wages on the state level will hurt the competitiveness of that state's industries vis-à-vis industries in neighboring states, the Illinois industries employing large numbers of minimum wage workers are not, for the most part, subject to interstate competition. Rather, they are place-bound retail trade and service industries that rely on local consumer and business spending. Given that affected industries are competing in relatively localized markets, rising labor costs associated with a new state minimum wage would not adversely impact their competitive position.

Table 9: Minimum and Near-Minimum Wage Employment by Industry, 2001

Industry	Percent of Industry Employees Earning Between \$5.15 and \$6.50
Eating and Drinking Establishments	58%
Gasoline Service Stations	39%
Cinemas	34%
Grocery Stores	32%
Hotels and Motels	29%
Food Stores, nec	28%
Misc. Retail Stores	27%
Private Household Services	24%
Apparel and Accessory Stores, except Shoe	23%
Personnel Supply Services	21%
Building Services	21%
Newspaper Printing & Publishing	20%
Department Stores	19%
Nursing and Personal Care Facilities	15%
Health Services, nec	15%
Furniture and Home Furnishing Stores	15%
Drug Stores	15%
Auto Repair Shops and Related Services	15%
Social Services, nec	13%
Child Day Care Services	13%
Computer and Data Processing Services	10%
Insurance Offices	10%
Business Services, nec	9%
Motor Vehicle Dealers	9%

Source: UIC-CUED calculations from Current Population Survey data.
“nec” = Not Elsewhere Classified

IMPACT ON BUSINESSES

A new minimum wage would directly raise labor costs for employees earning at or near the minimum wage. Although critics focus on the costs of the minimum wage to business, these costs would be in some measure offset by the benefits of increased consumer spending from the impacted workers and from decreased employee turnover rates and associated costs. We now look at both.

Costs to Businesses

For all Illinois industries, total net new wage payments arising from the \$6.50 minimum wage would amount to less than one percent (0.35%) of total 2001 wage payments, as shown in Table 10.¹⁷

Table 10: Net New Wage Payments Arising from the Proposed Illinois Minimum Wage

	Directly Impacted Workers	Net New Wages Attributable to Increase	Total 2001 Wages	Percent of Total Wages
All Industries	450,000	\$629.5 million	\$178.9 billion	0.35%

Source: UIC-CUED analysis of 2001 Current Population Survey data.

If the list of impacted workers is expanded to account for wage spillover effects on workers earning slightly more than the minimum wage (e.g., up to \$7.50 per hour), this figure rises to 0.49 percent of total 2001 wage payments (Table 11).¹⁸

Table 11: Net New Wage Payments including Spillover Effects

	All Impacted Workers	Net New Wages Attributable to Increase	Total 2001 Wages	Percent of Total Wages
All Industries	806,000	\$875.6 million	\$178.9 billion	0.49%

Source: UIC-CUED analysis of 2001 Current Population Survey data.

As noted above, the distribution of low-wage workers is not uniform across industries; businesses in the retail trade and service sectors are the predominant employers of these workers. For this reason, the analysis that follows focuses on the 22 Illinois industries in which 10 percent or more of the workforce earns \$6.50 or less per hour.

The tables below compare, on an industry-by-industry basis, the expected net new wage payments that would arise from the proposed Illinois minimum wage to total 2001 wage payments. For example, the Eating and Drinking Establishments industry paid \$4.74 billion in wages to Illinois workers in 2001. Under the new minimum wage, the industry would have paid an additional \$161 million in wages to those workers (a 3.4% increase). In Table 12 we calculate net new wages only for those workers directly impacted by the proposed minimum wage bill (e.g., workers earning between \$5.15 and \$6.50 per hour). Because previous studies have shown that minimum wage increases have a “wage

spillover effect” on the wages of workers earning slightly more than the minimum wage, we also have calculated the wage impacts of the proposed minimum wage increase on earners currently making between \$6.50 and \$7.50 per hour.¹⁹ The results of these calculations appear in Table 13. To remedy the small sample size in the Current Population Survey for many of the industries included in these analyses, we have amalgamated Drug Stores; Grocery Stores; Department Stores; Food Stores, not elsewhere classified; Miscellaneous Retail Stores; Apparel and Accessory Stores except Shoe; and Gasoline Service Stations into a single category entitled “Other Low-Wage Retail.”

**Table 12: Net Change in Wage Bill by Industry for Directly Impacted Workers
(Earning Between \$5.15 and \$6.50 per hour), based on 2001 Wages**

Industry	Directly Impacted Workers (thousands)	Net New Wages Attributable to Increase (\$ millions)	Total 2001 Wages (\$ millions)	Percent of Total Industry Wages
Eating and Drinking Establishments	121.0	\$161.0	\$4,740.6	3.41%
Furniture and Home Furnishing Stores	2.7	6.4	548.9	1.17%
Child Day Care Services	5.4	9.5	834.6	1.14%
Hotels and Motels	8.7	7.4	777.4	0.95%
Other Low -Wage Retail	45.7	55.7	6,651.0	0.84%
Social Services, nec	7.3	13.6	1,635.5	0.83%
Building Services	4.3	4.9	656.3	0.75%
Nursing and Personal Care Facilities	7.3	13.2	2,159.8	0.61%
Automotive Repair Shops and Related Services	6.3	5.7	1,351.9	0.42%
Personnel Supply Services	3.5	4.8	1,153.4	0.42%
Health Services, nec	6.1	7.0	2,278.0	0.31%
Business Services, nec	2.2	5.1	2,140.0	0.24%
Insurance Offices	3.8	5.2	5,042.0	0.10%
Computer and Data Processing Services	1.4	4.2	5,388.0	0.08%
Motor Vehicle Dealers	1.7	0.9	1,323.3	0.07%

Source: UIC-CUED analysis of 2001 Current Population Survey data.

“nec” = Not Elsewhere Classified

Of the 15 industries with large concentrations of minimum and near-minimum wage workers, 12 would experience a net annual wage bill increase of less than one percent. Only Eating and Drinking Establishments (3.41%), Furniture and Home Furnishing Stores (1.17%), and Child Day Care Services (1.14%) would experience net increases amounting to more than one percent of their 2001 wage payments.

**Table 13: Net Change in Wage Bill by Industry for All Impacted Workers
(Earning Between \$6.50 and \$7.50 per hour), Based on 2001 Wages**

Industry	Directly Impacted Workers (thousands)	Net New Wages Attributable to Increase (\$ millions)	Total 2001 Wages (\$ millions)	Percent of Total Industry Wages
Eating and Drinking Establishments	163.0	\$195.5	\$4,740.6	4.12%
Child Day Care Services	14.2	13.4	834.6	1.61%
Hotels and Motels	13.8	11.0	777.4	1.41%
Furniture and Home Furnishing Stores	4.0	7.6	548.9	1.39%
Other Low-Wage Retail	99.1	89.3	6,651.0	1.34%
Building Services	10.9	8.5	656.3	1.29%
Social Services, nec	10.3	15.0	1,635.5	0.92%
Nursing and Personal Care Facilities	16.1	18.2	2,159.8	0.84%
Automotive Repair Shops and Related Services	9.8	9.2	1,351.9	0.68%
Personnel Supply Services	5.6	7.5	1,153.4	0.65%
Health Services, nec	12.0	11.7	2,278.0	0.51%
Business Services nec	13.5	9.9	2,140.0	0.46%
Motor Vehicle Dealers	3.7	2.9	1,323.3	0.22%
Insurance Offices	5.0	6.0	5,042.0	0.12%
Computer and Data Processing Services	3.0	6.1	5,388.0	0.11%

Source: UIC-CUED analysis of 2001 Current Population Survey data.

“nec” = Not Elsewhere Classified

Of the 15 industries with large concentrations of workers earning between \$5.15 and \$7.50 per hour, nine would experience a net annual wage bill increase of less than one percent. Only Eating and Drinking Establishments (4.1%), Child Day Care Services (1.6%), Hotels and Motels (1.4%), Furniture and Home Furnishing Stores (1.4%), the composite category Other Low-Wage Retail (1.3%) and Building Services (1.3%) would experience net wage increases amounting to more than one percent of their 2001 wage payments.

Benefits to Business of Raising the Minimum Wage

Low-income earners are more likely to spend their income locally than any other group of workers, a fact with substantial implications for any pay raises they might receive. In practical terms, this means that a considerable portion of the new wages paid under a \$6.50 minimum wage will return to Illinois businesses in the form of increased consumer spending (Table 14).

Table 14: Economic Impact in Illinois of a \$6.50 Minimum Wage

	Directly Impacted Workers (\$5.15-\$6.50/hr.)	All Impacted Workers (\$5.15-\$7.50/hr.)
Net New Business Sales	\$903.5 million	\$1,272.8 million
Employee Compensation	\$236.9 million	\$333.8 million
Employment	8,900	12,600

Source: UIC-CUED calculations using Implan software.²⁰

Consumer spending of directly impacted workers would stimulate more than \$903 million in net new business sales in Illinois. In generating these sales, Illinois businesses would add 8,900 new jobs and pay an estimated \$236 million in net new wages. When workers indirectly impacted by the new minimum wage are included, the results are significantly larger. Consumer spending of all workers impacted by the new minimum wage would result in \$1.272 billion in net new sales in Illinois. In generating these sales, Illinois businesses would add 12,600 new jobs and pay an estimated \$333 million in net new wages.

While these changes would not entirely offset the new wage payments associated with the \$6.50 minimum wage, the additional sales triggered by worker spending would partially compensate for increased labor costs borne by Illinois businesses as a result of the proposed minimum wage.

Although a comprehensive examination of such benefits to Illinois businesses lies beyond the scope of the current analysis, it also is important to note that higher wages result in decreased employee turnover and associated costs, as well as increased worker productivity (see below).

EMPLOYMENT IMPACTS: EMPLOYEE SUBSTITUTION

Minimum wage and near-minimum wage workers stand to receive immediate wage raises as a result of the \$6.50 minimum wage. As many economists have cautioned, however, they potentially stand to see diminished employment opportunities as well. In this section we use state-level earnings and employment data from the U.S. Current Population Survey to evaluate this concern.

Will a Higher Minimum Wage Cost Less-Educated Workers Their Jobs?

Economists historically have warned that raising the minimum wage might induce firms to hire a smaller number of better-educated workers in place of the less-educated workers who traditionally hold minimum wage jobs. As is the case with employment levels, this

“substitution effect” would unintentionally penalize the workers the minimum is designed to benefit. However, our analysis of demographic trends in states with minimum wages higher than the federal standard fails to find a link between higher minimum wage levels and declining employment prospects for less-educated workers.

As noted earlier, 11 states and the District of Columbia have minimum wage rates higher than the federal level. Taken together, minimum wage and near-minimum wage earners in these states were more likely to be students than equivalent earners in other states, not less.²¹ Crucially, our analysis indicates there is no necessary relationship between changes to the minimum wage and the educational attainment levels of workers holding minimum wage jobs. In other words, there is no evidence of substituting better-educated workers for less-educated workers when the minimum wage increases.

Likewise, far from finding conclusive evidence of worker substitution, comparisons of demographic traits of minimum wage workers – both between these 11 states and the District of Columbia individually and between these 12 as a group and the nation – produce ambiguous and contradictory evidence of substitution effects. We begin with a comparison of the demographic characteristics of the minimum wage workforce in the individual states that have enacted minimum wage laws.

In Delaware, the District of Columbia, Hawaii, Maine, Oregon, and Washington, evidence exists of substituting more-experienced workers for less-experienced workers (as gauged by both age and educational attainment) as wages increased. In these states, minimum wage earners were increasingly likely to be heads of household in the latter part of the period, as well. However, evidence from Massachusetts and California indicates the reverse. Contrary findings are also revealed in the Alaska, Rhode Island, and Vermont data; however, this may be the result of small numbers of observations from these states. These observations undermine any assumption that substitution away from younger workers or those with less education is a certain outcome of a minimum wage increase.

- *California.* In the context of state minimum wage increases, the minimum wage-earning population has decreased appreciably in average age (32.3 years to 26.6 years).
- *Washington.* As wages increased, the demand for workers with more education increased as well. In the context of stable workforce trends, the proportion of workers earning minimum wages with some post-secondary education increased significantly (25.2 percent of minimum wage earners had some post-secondary education in 1996, compared to 32.7 percent in 2001).
- *Oregon.* Minimum wage earners were more likely to have a high school education or better in 2001 than they were in 1996: The proportion without a high school diploma dropped from 44.8 to 41.3 percent and the proportion of minimum wage earners with a high school diploma increased from 27.7 percent to 30.9 percent.

- *District of Columbia.* Although trends in educational attainment demonstrated slight increases for the working population overall, the proportion of minimum wage workers holding a high school diploma increased dramatically, from 21.7 to nearly 40 percent, while the proportion without a high school diploma fell slightly over the same period.
- *Maine.* While the proportion of the minimum wage workforce with less than a high school education fell from 27.4 percent in 1996 to 20.3 percent in 2001, the proportion with a high school diploma increased from 38.7 to 43.2 percent.
- *Hawaii.* The proportion of the minimum wage workforce holding a high school diploma increased over the period from 28.9 to 36.3 percent, and the average age increased from 29.3 years in 1996 to 32.1 years of age in 2001.
- Minimum wage workers in Alaska and California were somewhat younger at 26.6 years of age, and older in Rhode Island at 33.7 years of age.

Rising education levels among minimum wage earners do not necessarily indicate a minimum wage-induced shift in the educational attainment levels of this population. Rather, these changes might reflect the rising educational attainment of the U.S. workforce as a whole. Having considered differences between the states with minimum wage laws, we now compare the demographic traits of the minimum wage workforces in these 12 states as a group to all other states:

- Minimum wage workers in the 12 states were *less likely* to have post-secondary education than were minimum wage workers in other states.
- Minimum wage workers in Connecticut were somewhat less likely to be high school graduates, and those in the District of Columbia somewhat more likely.
- In states with higher minimum wages, minimum wage earners were just as likely to head a household as were minimum wage earners in the nation as a whole. In these 12 states, raising the minimum wage does not appear to have changed the employability of heads of household.
- The proportion of minimum wage earners supporting dependent children was equivalent in the 12 states and the nation as a whole.

In sum, trends among minimum wage workers mirror trends in the U.S. as a whole, as do trends in the 12 states that have enacted minimum wage rates above the federally prescribed minimum. It is important to note that changes identified above in the composition of the minimum wage workforce occurred in a context of rising educational attainment for the American workforce as a whole. Hence, it does not appear that employers demanded more training in their employees as minimum wage levels increased, but rather that workers were, on average, increasing their own levels of educational attainment.

EMPLOYMENT IMPACTS: JOB GROWTH

Critics of wage floors contend that raising the value of the minimum wage inevitably forces businesses to employ fewer low-wage workers. If this prediction were to hold true, the ensuing employment losses would significantly mitigate the benefits to workers of a higher minimum wage. To evaluate this crucial question, we conducted a study of the relationship between minimum wage increases and employment growth across all 50 states and the District of Columbia.

Does Raising the Minimum Wage Reduce Employment?

All the Illinois industries with a large proportion of their labor force in minimum and near-minimum wage jobs are locally oriented, with the exception of parts of the hotel and motel industry. Such industries have long been differentiated from “basic,” export-oriented industries which serve national or international markets. Illinois basic industries, like automobile manufacturing, pharmaceuticals, and agriculture, compete with similar producers outside the state. Basic industries must be highly sensitive to their costs relative to those of out-of-state competitors. By contrast, locally oriented, “non-basic” firms must worry about competition with other Illinois firms. For example, a diner in Peoria competes almost exclusively with similar eating and drinking establishments in its immediate geographical area; it is not concerned with the labor costs of restaurants in other states.

Many regional models postulate that the level of employment and its growth in each non-basic industry will be directly proportional to the level and growth of overall regional employment.²² Formally, such a model for industry *i* can be expressed as follows:

$$(1) \quad \text{emp}_{jt} = a_j + b * \text{stemp}_{jt} ,$$

where emp_j is employment in state *j* and year *t*, and stemp_{jt} is total state employment in state *j* and year *t*, and a_j is a intercept term representing scale effects for state *j*.

In this view, the growth of locally oriented, “non-basic” industries will depend primarily on overall regional prosperity and only secondarily on common regional input costs.²³ This observation implies that an increase to a state’s minimum wage puts no single firm in a non-basic industry at a disadvantage relative to its competitors, since these competitors also must adapt to the change in wage thresholds.

While equation (1) is widely accepted in theory, it assumes rather than demonstrates the lack of a significant role for wage costs in determining non-basic employment growth. A more general formulation of a state-level industry growth model must allow for the possibility that an industry could be impacted by changes in wage costs. Moreover, such an equation should meet well-established statistical criteria to avoid biasing the estimated effects. Equation (2) provides a plausible structure for such estimation for any industry *i*:

$$(2) \quad \text{gemp}_{jt} = a + b * \text{gstemp}_{jt} + c * \text{gmw}_{jt} + d * \text{gstavhourly}_{jt}$$

where $gemp_{jt}$ is the growth rate of employment in industry i , in state j , in year t ; and $gstemp_{jt}$, gmw_{jt} , and $gstavhourly_{jt}$, are growth rates in overall state employment, the real minimum wage, and the real average hourly wage, in state j and year t , respectively. This equation is defined directly in terms of growth rates.

Overall wage costs to employers of low-wage workers will be affected both by the real minimum wage level (for minimum wage workers), and by state average hourly wage levels (for non-minimum wage workers). In equation (2), both of these industry-specific wage effects are added to the state employment effect modeled in equation (1). The literature on the estimation of minimum wage effects across states and over time generally supports this type of specification.²⁴ In general, equations like equation (2) are estimated using several lags on each of the independent variables. For this study, we find that three lags are more than adequate to capture delayed responses to changes in these factors.

Estimates of the c coefficients in equation (2) measure the effect of real minimum wage changes on industry growth after taking into account state employment and state hourly wage effects. The hypothesis that growth in real minimum wages affects growth in a specific non-basic industry implies that the c coefficients in (2) will be significantly different from zero. Such tests form the core of our investigation.

It is important to emphasize that the gmw variable measures the difference between growth in legislated nominal minimum wages and changes in the cost of living. If the minimum wage were linked to a COLA like that under consideration by the Illinois General Assembly, this variable would be zero in any year in which no legislative action was taken. However, without a COLA, this variable would decline during years in which no legislative action is taken.

Data

As in the analyses above, employment effects in this section are estimated using Current Population Survey merged outgoing rotation group (MORG) data obtained from the National Bureau of Economic Research (NBER). These data have been used to model year-over-year employment and earnings growth, both by official state agencies and by academic researchers.²⁵ For each of seven critical low-wage industries, we calculated weighted sums to obtain total industry employment (emp_{jt}) in that industry for each state (j) and years (t) from 1983 to 2001. To construct lags we dropped three or four initial years from the sample, depending on the analysis.

We calculate a total employment variable ($stemp_{jt}$) by summing employment in all of the industries in the MORG dataset for each state and year. Using all workers included in $stemp$, we calculate a real state average hourly wage variable ($stavhourly_{jt}$). This variable is an average of usual weekly earnings divided by usual weekly hours for each worker and by the national CPI-U with a 2002 base value of 1.0. Both $stemp_{jt}$ and $stavhourly_{jt}$, as

suggested by the model above, are statewide variables, not industry variables. We also constructed three yearly lags of these variables.

To measure the effective minimum wage in each state in each year, we created a real annual state minimum wage series by averaging monthly state minimum wage levels for each year and dividing by the national CPI-U. We used the pre-1990 nominal state minimum wage data posted by David Neumark and supplemented this with BLS data through 2001. The nominal minimum wage is equal to the federal minimum wage in most states in most months.

Method

Because of considerable multi-collinearity between the lags of the independent variables, we tested for the significance of the sum of the set of coefficients for each. For example, the null hypothesis for the test for significance of the effect of the minimum wage on employment is:

$$(3) \quad c(0) + c(-1) + c(-2) + c(-3) = 0$$

where $c(0)$ is the contemporaneous coefficient of the growth rate in the minimum wage in equation (2); $c(-1)$ is the coefficient of the one year lagged minimum wage in the same equation; and so on.

The industries most likely to be affected by a state minimum wage increase are for-profit industries with a large share of workers earning between \$5.15 and \$6.50 per hour. The reliability of yearly and state-level, industry-specific data from the MORGs will be a function of the size of the sector relative to state employment as a whole. We thus chose three criteria to select industries likely to be most affected by minimum wage changes. Such industries must:

- Operate on a for-profit basis,
- Employ a large share of workers who would be directly impacted by a minimum wage increase, and
- Account for a significant share of overall state low-wage employment.

These criteria led to the following industry list:²⁶

- 641—Eating and Drinking Establishments
- 999—Other Low Wage Retail
- 832—Nursing and Personal Care Facilities
- 762—Hotels and Motels
- 840—Health Services, not elsewhere classified
- 731—Personnel Supply Services

- 722—Building Services

Results

As suggested above, the levels of employment (emp) for each of the included industries are highly correlated over time and across states with the level of their respective state total employment (stemp). This correlation is greater than 0.9 for six of our seven industries. The only exception, Hotels and Motels (762), also has a robust 0.79 correlation which, like the others, is highly significant.

When we turn to the employment growth rates of the eight selected industries, we find that they tend to be highly correlated with overall growth rates of respective state total employment (Table 15). We also find that they have no significant simple correlation with annual changes in real minimum wages.

We run cross-sectional time-series panel regressions for each industry to estimate the general growth model of equation (2) which examines the effect of real minimum wage increases after controlling for growth in state employment (business cycle effects) and state average hourly wage (average labor cost effects). Five of the potentially highly impacted industries show significant positive effects for overall state employment growth on industry employment growth (Table 18).²⁷ This result adds support to the contention that the industries in question are non-basic industries that primarily serve within-state markets.

Table 15: Simple Contemporaneous Correlations of Growth Rates—Cross-Sectional Time Series Data

Industry	Growth Rate State Employment	Significance Level	Growth Rate Minimum Wage	Significance Level	Growth Rate State Average Hourly Wage	Significance Level
	(gstemp)	(gstemp)	(gmw)	(gmw)	(gstavhourly)	(gstavhourly)
1000 - All Listed Industries	0.49	***	-0.02	ens	-0.14	***
641 – Eating and Drinking Est.	0.26	***	-0.03	ns	-0.07	*
999 – Other Retail	0.03	***	-0.03	ns	-0.04	ns
832 – Nursing and Personal Care Facilities	0.17	***	0.02	ens	-0.10	**
762 – Hotels and Motels	0.08	*	0.03	ns	-0.08	*
840 – Health Services, nec.	0.10	**	-0.03	ns	-0.00	ens
731 – Personnel Supply Services	0.12	***	0.05	ns	-0.03	ns
722 – Building Services	-0.01	Ens	0.00	ens	-0.04	ns
* Significant at the 10% level or better. ** Significant at the 1% level or better. *** Significant at the 0.1% level or better. ns not significant at the 10% level. ens not significant at the 50% level.						

The same set of panel regressions provide estimates of the four coefficients [$c(0)$, $c(-1)$, $c(-2)$, $c(-3)$] that are required for our key test of the effects of the minimum wage on low-wage employment growth.

Our central finding can be easily summarized: The null hypothesis that growth in real minimum wages has zero effect on employment growth in the low-wage sector as a whole cannot be rejected. For the total of our low-wage industries, the four-year aggregated effect as measured by the sum of the relevant coefficients is extremely non-significant by usual statistical standards.

Six of our seven individual industries also show an absence of any significant effect of the minimum wage on employment growth (Table 16). The seventh, while significant at the 10 percent level, fails the more rigorous test of one percent significance.²⁸

Table 16: Growth Rate Model, Cross-Sectional Time-Series Results—Estimates from Equation 2

Industry	Growth Rate State Employment	Significance Level	Growth Rate Minimum Wage	Significance Level	Growth Rate State Average Hourly Wage	Significance Level
	(gstemp)	(gstemp)	(gmw)	(gmw)	gstavhourly)	(gstavhourly)
1000 - All Listed Industries	0.98	***	-0.03	ens	-0.22	ns
641 – Eating and Drinking Est.	1.13	***	-0.03	ens	0.27	ens
999 – Other Retail	0.62	*	-0.06	ens	-0.25	ns
832 – Nursing and Personal Care Facilities	1.13	*	0.01	ens	-0.74	ns
762 – Hotels and Motels	1.19	*	-0.01	ens	-0.31	ens
840 – Health Services, nec.	0.98	Ns	-1.04	*	-0.61	ens
731 – Personnel Supply Services	1.97	*	0.40	ens	-0.43	ens
722 – Building Services	0.44	Ens	0.09	ens	-0.47	ens

Note: For each variable the reported effect is the sum of the coefficients of the contemporaneous value and the coefficients of each of three lagged values as suggested in equation (5). Significance levels are reported for the null hypothesis that this sum equals zero.

* Significant at the 10% level or better.
** Significant at the 1% level or better.
*** Significant at the 0.1% level or better.

ns not significant at the 10% level.
ens not significant at the 50% level.

Considering that the minimum wage by definition raises the cost of employing low-wage workers, why should it be that we find no statistically significant evidence of decreased employment growth? Recent empirical research examining this relationship provides some clues. The most influential of this research has focused on the fast food industry, which employs a large number of minimum wage and near-minimum wage workers, and in which the negative impacts of raising the minimum wage are expected to be greatest.

In studies of the fast food industry after minimum wage increases in New Jersey (and also in Texas), David Card and Alan B. Krueger found that “the relative employment of workers most heavily affected by the New Jersey minimum wage seems to have risen rather than to have fallen.”²⁹ Card and Krueger offer results that help explain this phenomenon, suggesting that employers compensated for increased labor costs through means other than employment reductions, such as reductions in turnover costs, increases in productivity, and minimal reductions in profits. In their study of New Jersey fast food restaurants they also found that the pre-tax price of a full meal (a main course, small order of French fries, and medium-sized soft drink) increased four percent (or from \$0.08 to \$0.10 per meal).³⁰ The Texas study found similar results.³¹ As seen above, the \$6.50 minimum wage would increase wage payments for eating and drinking establishments by

3.4 percent to 4.1 percent; for the vast majority of Illinois industries, the increase in wage payments would be far less than one percent. Because the additional payroll costs associated with the \$6.50 minimum wage constitute such a small portion of employers' wage bills, it is reasonable to expect that employers will be able to recover these costs through decreased employee turnover, productivity gains, and, to a lesser extent, modest changes in product pricing and other business strategies.

In addition to these important findings, Card and Krueger also found that:

- The fraction of full-time employees in the fast-food industry in New Jersey increased after the minimum wage was raised.³²
- The minimum wage increase was associated with increases, not decreases, in fast-food industry employment in both New Jersey and Texas.³³
- There was no evidence that New Jersey fast food establishments offset the minimum wage increase by reducing the availability of reduced-price or free meals.³⁴
- There was no strong evidence that fast food restaurants reduced employee fringe benefits to offset the increased cost of the minimum wage.³⁵

ASSESSING THE NEED FOR A COST-OF-LIVING ADJUSTMENT

To this point we have found that establishing an Illinois minimum wage of \$6.50 would substantially raise the earnings of many low-income households without unduly burdening Illinois employers and without reducing employment growth. For these reasons, a minimum wage of \$6.50 appears to be a benefit to Illinois.

However, this is not the only issue before the Illinois General Assembly. In addition to taking up the question of a minimum wage, the Assembly is taking up the question of indexing that minimum wage to inflation. Accordingly, this section evaluates the merits of a cost-of-living adjustment (COLA), and weighs the evident advantages of the COLA for Illinois workers against potential disadvantages to Illinois businesses.

As noted above, inflation would immediately begin to erode the value of a \$6.50 minimum wage. As is the case with other state wage policies, the Illinois General Assembly has recognized the value of COLAs by repeatedly passing legislation that guarantees state workers regular cost-of-living increases. The list of workers benefiting from a COLA includes: the state legislature, the governor, elected constitutional officers, and many high-ranking officials, all of whom receive a 3.8 percent annual pay increase by law.³⁶ A considerable majority of the state's 75,000 employees also count on a COLA.³⁷ Additionally, 12,000 state workers classified as "merit" employees receive a standard annual raise of \$1,500 in addition to merit-based pay increases.³⁸ For these workers, the COLA represents a reasonable adjustment of their wages to match the rising cost of living.

In many respects, the COLA is a standard part of the compact between employers and employees. The COLA provides both parties with a measure of wage stability and predictability that improves planning and decision-making capabilities. The last federal minimum wage increase, a two-step adjustment from \$4.25 to \$5.15, raised the nominal value of the minimum wage by 21 percent.³⁹ However, the real value of this 1995-97 \$0.90 nominal wage increase fell to just \$0.13 by 2002. A COLA would maintain the value of the minimum wage while eliminating such unpredictable wage spikes.

While the benefits of the COLA appear to be straightforward, it carries no evident disadvantages for the Illinois economy. As seen in the above analysis of the link between the minimum wage and employment, states that have allowed the real value of the minimum wage to erode do not show higher employment growth rates. On the whole, our findings suggest that ensuring the real value of the Illinois minimum wage through a COLA would maintain its significant benefits to Illinois workers without negatively impacting the state's future employment growth.

Evidence from Washington State

The case of Washington State provides guidance on the probable impacts of a state minimum wage increase with a COLA. In 1998, Washington's electorate voted to increase the minimum wage to \$6.50 over the course of two years, and to maintain its value with a cost-of-living adjustment.

Despite some predictions that Washington's minimum wage and COLA would increase unemployment for low-wage workers and hinder the competitiveness of the state's industries, evidence suggests that the Washington economy has been unaffected. A recent evaluation of Washington's minimum wage policy, conducted by the non-partisan Economic Opportunity Institute, found no meaningful link between the minimum wage and either employment levels or inflation:

- Since the implementation of the first minimum wage increase in 1999, employment growth in the retail trade industry, which relies heavily on minimum wage and near-minimum wage workers, has been higher than or on par with the national average and with neighboring Oregon.⁴⁰
- Similarly, employment in eating and drinking establishments grew continually after the minimum wage increase. By 2008, the industry is projected to grow by 26.3 percent over its 1998 (the year of Washington's first minimum wage increase) level.⁴¹
- Although some economists have expressed concern regarding the impact of the minimum wage on inflation, the Consumer Price Index (CPI) grew at roughly the same rate after the increase in the Seattle metropolitan area as it did in other western metropolitan areas. Inflation for food consumed away from home was 9.4 percent in Washington compared to 8.7 percent in other western U.S. cities for the period, a difference which resulted in price increases of just a few cents.⁴²

CONCLUSION

This evaluation of the proposed Illinois minimum wage has revolved around three main questions. First, would a \$6.50 minimum wage improve the earnings of low-income families? Second, would this minimum wage impose excessive costs on businesses, thereby reducing employment opportunities for low-income workers? Third, would a statutory COLA extend or diminish the benefits of the minimum wage?

Our research suggests that the minimum wage is indeed an effective policy instrument for improving the earnings of low-income households. Contrary to the popular image of minimum wage earners as teenagers and high-school students, we find that more than one-third of the Illinois households with a worker earning less than \$6.50 per hour depend exclusively on jobs paying this amount or less. The evidence from our study also demonstrates that there is no statistically significant relationship between minimum wage increases and employment growth. We conclude that a minimum wage of \$6.50 with an annual cost of living adjustment would provide substantial benefits to low-income households without harming the Illinois economy.

ENDNOTES

¹ Source: UIC-CUED analysis of 2001 Current Population Survey data. The group of “workers earning at or near the minimum wage” consists of all workers earning between \$5.15 and \$6.50 per hour.

² Source: UIC-CUED analysis of Bureau of Labor Statistics minimum wage data.

³ See Section III.

⁴ Source: CUED calculations from U.S. Bureau of Labor Statistics data. Please see attached appendix for details. All values are adjusted to 2002.

⁵ The findings throughout this section are based on analyses using Current Population Survey (CPS) annualized data from merged outgoing rotation groups (MORGs). The CPS is administered monthly to approximately 60,000 households, and MORGs are extracts of the basic monthly CPS during a household’s fourth and eighth month in the survey, when usual weekly hours and earnings questions are asked in addition to the regular workplace and demographic questions. Every household entering the CPS is interviewed each month for four months, ignored for eight months, and interviewed again for four more months. Usual weekly hours and earning questions are asked only at households in their fourth and eighth interview. These outgoing interviews are the only ones included in the MORGs. Since new households enter each month, only one fourth of all households are in an outgoing rotation each month. Although unlikely, a risk of including the same household in consecutive years exists. To ensure against double counting, estimations using consecutive years are avoided in these analyses. Finally, the survey data includes population weights for individual observations to adjust for survey non-response, disproportionate representation (either over- or under-representation) of individuals relative to their share of the overall population based on independent estimates of the current population, variation from previous months, and seasonality for key labor force statistics.

⁶ Source: Robert Pollin, Stephanie Luce, and Mark Brenner, 1999. *Economic Analysis of the New Orleans Minimum Wage Proposal*. Research Report 1. Political Economy Research Institute, University of Massachusetts-Amherst.

⁷ Carrington, William J. and Bruce C. Fallick, 2001. “Do Some Workers Have Minimum Wage Careers?” *Monthly Labor Review* (May): 17-27.

⁸ Carrington and Fallick, p. 19.

⁹ Source: U.S. Census Bureau. <http://www.census.gov/hhes/poverty/threshld/thresh02.html>. Annual earnings of minimum wage workers are based on a 2,080-hour work year.

¹⁰ Source: U.S. Bureau of Labor Statistics.

¹¹ Source: U.S. Department of Housing and Urban Development, Fair Market Rents. <http://huduser.org>.

¹² Source: U.S. Bureau of Labor Statistics, Consumer Expenditure Survey.

¹³ Diana Pearce with Jennifer Brooks, 2001. *The Self-Sufficiency Standard for Illinois*. Chicago: Women Employed Institute.

¹⁴ Ibid.

¹⁵ Table 8 lists proportions separately for three areas of the state: Chicago Metro, Other Metro, and Non-Metro, since self-sufficiency standards account for cost of living, which differs among these areas. Chicago Metro includes the Chicago MSA, Other Metro includes respondents from Peoria, Rockford, Springfield, and the portion of greater St. Louis that is in Illinois, and Non-Metro contains respondents from non-metropolitan areas.

¹⁶ Source: UIC-CUED analysis of 2001 Current Population Survey data.

¹⁷ Source: UIC-CUED calculations from 2001 Current Population Survey data. Estimates are made by raising the wage of all workers earning between \$5.15 and \$6.50 an hour to \$6.50. Workers earning sub-minimum wages are excluded under the assumption they are exempt from Fair Labor Standards Act coverage. See subsequent tables for details.

¹⁸ Ibid.

¹⁹ To calculate the ripple effect, we used the methodology deployed by Pollin, Luce, and Brenner. This method consists of dividing workers earning wages between the current minimum wage and one dollar above the proposed minimum wage into 4 quartiles, calculating the average wage increase the new minimum wage would produce for workers in the bottom quartile, then halving that rate of increase for individual earners in each successive quartile.

²⁰ Projections are based on the assumption that minimum wage payments go to households earning between \$30,000 and \$40,000 per year.

²¹ Source: UIC-CUED analysis of Current Population Survey data.

²² Philip McCann, 2001. *Urban and Regional Economics*. New York, NY: Oxford University Press.

²³ Joseph Persky and Wim Weiwei, 1994. "The Growing Localness of Global Cities," *Economic Geography* Vol. 70: 129-143.

²⁴ Though some specifications have used a single relative minimum wage variable equal to the state minimum wage divided by the state average hourly wage (Neumark and Wascher, "Employment Effects of Minimum and Subminimum Wages: Panel Data on State Minimum Wage Laws," *Industrial and Labor Relations Review* 46(1) 1992), we find the critique of this methodology by Card, Katz, and Kreuger ("Comment on David Neumark and William Wascher," *Industrial and Labor Relations Review* 47(3), 1994) to be compelling and thus do not constrain the effect of the state average hourly wage to be opposite and equal to that of the minimum wage. We also accept the critique by Burkhauser, Couch, and Wittenburg ("A Reassessment of the New Economics of the Minimum Wage Literature with Monthly Data from the Current Population Survey," *Journal of Labor Economics* 18(4) 2000) of specifications, including some of those estimated by Card, Katz, and Kreuger, which employ yearly, as well as state specific, fixed intercept terms. Equations (3) and (4) are designed to avoid both of these problems by including the state average hourly wage as a separate and unconstrained independent variable, and by not including yearly intercept terms. As is noted above, much of this literature looks at the effects of minimum wages on teenage employment. As we are interested in the effect of minimum wages on overall employment growth, and as most minimum wage workers are not teenagers (see above), we see no reason to restrict our analysis to teenage workers. However, as the estimation methods are similar, many of the methodological conclusions derived from these studies of teen employment are relevant to our investigation of industry-specific employment growth.

²⁵ From a 2/24/03 communication from Dr. Jean Roth, co-creator of the NBER MORG dataset.

²⁶ We selected three-digit (CPS classified) for-profit large industries with at least a 15 percent industry share of \$6.50 per hour or above workers, and at least 0.8 percent of all \$6.50 per hour or above employment in the state, both in 2001. In order to reduce sample size problems, we also created an aggregated Low-Wage Retail (999) sector by adding together individual CPS three-digit industries (all with 15 percent or more low-wage employment) with smaller numbers of observations. These industries were: Gasoline Service Stations – 621, Misc. Retail Stores – 682, Apparel and Accessory Stores – 623, Department Stores – 591, Grocery Stores – 621, Drug Stores – 642, Food Stores, nec – 610, and Furniture and Home Furnishing Stores – 631. Though some of these sectors have low-wage state employment shares of less than 0.8 percent, the low-wage retail sector as a whole contains significantly more than 0.8 percent of low-wage state employment. We did not aggregate the other small sample sectors as they do not share common institutional characteristics. In particular, all of the other sectors, except Health Services, nec – 840, are distinct BLS 1987 three-digit SIC codes. CPS industry Health Services, nec. – 840 is an amalgamation of three BLS 1987 SIC codes: Medical and Dental Labs – 807, Home Health Care – 808, and Misc. Allied Health Services, nec. – 809.

²⁷ The significance levels for gstemp in Table 1 use a test analogous to equation (3).

²⁸ We obtain very similar results to these for two variations on the reported equation estimated. The first uses the regional CPI-U instead of the national CPI-U. The second uses growth in an "above federal minimum wage variable" which deflates the state minimum wage not by the cost of living, but by the

national minimum wage. In addition, all of these models were estimated with fixed effects, which did not prove statistically significant.

²⁹ David Card and Alan B. Krueger, 1995. *Myth and Measurement: The New Economics of the Minimum Wage*. Princeton, NJ: Princeton University Press, p. 57, italics in original.

³⁰ Card and Krueger, pp. 52-56.

³¹ Card and Krueger, pp. 62-63.

³² Card and Krueger, pp. 26-33. This finding comes from the study of New Jersey fast food establishments after that state raised its minimum wage in 1992.

³³ Card and Krueger, pp. 33-36.

³⁴ Card and Krueger, pp. 46-50.

³⁵ Card and Krueger, pp. 50-51.

³⁶ Source: *Lincoln Daily News*, November 29, 2002.

³⁷ American Federation of State, County and Municipal Employees Council 31, AFSCME Council 31 website.

³⁸ National Governors Association & National Association of State Budget Officers, 2002. *The Fiscal Survey of States*.

³⁹ Source: UIC-CUED analysis of U.S. Bureau of Labor Statistics wage-rate data.

⁴⁰ Jason Smith, 2003. *Working Well in Washington: An evaluation of the 1998 Minimum Wage Initiative*. Economic Opportunity Institute, p. 13. <http://www.econop.org/MinimumWage/Brief2003.htm>

⁴¹ Source: Washington Employment Security Department, <http://www.workforceexplorer.com/cgi/databrowsing/?PAGEID=4>

⁴² Smith, p. 14.